

Specification

Invention Titled “Grease Zerk Dust Cap”

Inventor: Jay Stadel

Grease Zerk Dust Cap

References to Related Applications

There are no references to related applications.

Statements of Federal Sponsorship

There are no statements of federal sponsorship.

References to "Sequence Listings"

There are no references to any sequence listings.

Background of the Invention

This field of this invention includes agricultural, industrial, and automotive industries, and any other application where grease zerks are utilized.

Grease zerks are used to periodically lubricate a component such as a bearing or shaft. The zerk is fastened to the component with a threaded base which screws into the component. A tool commonly known as a grease gun is affixed to the zerk and grease is forced through the zerk into the component being lubricated. When the grease gun is removed, residual grease is left on the zerk. During operation of the machine, airborne particles accumulate on the residual grease on the zerk. Before the next lubrication, a person must carefully wipe the accumulated matter from the zerk before greasing. If this is not done, the contaminants that have accumulated on the zerk are injected into the component and cause damage. In some cases, high-velocity particles continually strike the zerk, removing metal from it. This prevents effective greasing since the grease can slide past the worn area instead of being injected into the component. Grit also accumulates around the check ball in the zerk and is difficult even to wipe off. Often this grit is injected directly into the component during greasing. The other problem associated with grease zerks is water. Water leads to rust on the zerk and the check ball inside it, causing the zerk to leak grease back out of the component after greasing. These problems are the reason I have devised the grease zerk dust cap.

Summary of the Invention

The grease zerk dust cap is a cover affixed to a grease zerk to keep it free of unwanted matter and protect it from adverse operating conditions.

Description of Drawings

FIG. 1 shows a dust cap as it appears on the outside.

FIG. 2 shows a cutaway of a dust cap with the bore to accept a grease zerk.

FIG. 3 shows a cutaway of a dust cap affixed to a grease zerk as it would look during operation.

Detailed Description of the Invention

The grease zerk dust cap is a protective cover for a grease zerk to keep it free of unwanted matter. It is composed of a rubber-based material that is resistant to various chemicals, heat, cold and ultraviolet radiation. It is a single piece cap with two opposing ends, each end having a flare. FIG. 1 shows a dust cap as it appears on the outside. The end with the larger flare has a bore to accept a grease zerk. FIG 2 shows a cutaway of the cap with the bore to accept a zerk. Inside the bore is a raised portion on the circumference of the bore, that, after being slipped over the head of the grease zerk, rests in the neck of the zerk as a means to retain the cap to the zerk, since some grease zerks are used on shafts and drivelines where high revolutions per minute will throw the cap off of the zerk if a retaining ring is not utilized. The large flare, on the end of the cap having the bore, exists to scrape the zerk free of residual grease when the cap is affixed to the zerk after the zerk is used to lubricate a component. On the opposing end of the cap is a flare that provides a means to grip the cap with the fingers of the hand and remove it, since the retaining ring inside the cap resists slipping past the head of the zerk. The grip flare is slightly domed for increased durability. FIG 3 shows a dust cap affixed to a grease zerk as it would appear during use. There is no known prior art.

Claims

I claim,

1. A protective cap to be affixed to a grease zerk.
2. The device of claim 1, where the cap is composed of a flexible, rubber-based material.

3. The device of claim 1, where the cap consists of one piece, having opposing ends, with a flare on each end, and a cylindrical portion therebetween.
4. The device of claim 3, where one end of the cap has a bore with a diameter of .255" and a depth of .350", and a raised portion on the circumference of the bore existing .100" into the depth of the bore, with a radius of .020" and a protrusion into the bore of .020".
5. The device of claim 3, where the end of the cap having the bore, measures .700" outside diameter and decreases in diameter to .350", in the form of a consistent taper, at an angle of 120 degrees relative to the cylindrical portion of the cap.
6. The device of claim 3, where the cylindrical portion of the cap measures .350" in outside diameter and .100" in length.
7. The device of claim 3, where the remaining end of the cap has a outside diameter which measures .550" and decreases in diameter to .350" in the form of a consistent taper, at an angle of 150 degrees relative to the cylindrical portion of the device.
8. The device of claim 3, where the end of the cap measuring .550" in diameter is slightly domed.
9. The device of claim 8, where an image of a grease gun exists on the face of the domed end.